a stator and a magnetic core of soft magnetic material constituting a magnetic circuit; and

a2 cont.

a coil wound around the magnetic core,

wherein the plate thickness d (m) of the soft magnetic material constituting at least one of the stator and the magnetic core is set at a value represented by the following formula of

$$d = \sqrt{\frac{k_h}{k_e}\rho} \cdot f^{-0.375} B_m^{-0.175} \qquad (1)$$

where k_h represents hysteresis loss coefficient, k_e represents eddy-current loss coefficient, $\rho(\Omega \cdot m)$ represents resistivity, f (Hz) represents frequency and B_m (T) represents maximum amplitude magnetic flux density of the soft magnetic material; and

a processor actuated by the electric energy generated by the power generator.

15. (Amended) An electronically controlled timepiece, comprising:

a power generator comprising:

a rotor having a permanent magnet;

a stator and a magnetic core of soft magnetic material constituting a magnetic circuit; and

a coil wound around the magnetic core,

wherein the plate thickness d (m) of the soft magnetic material constituting at least one of the stator and the magnetic core is set at a value represented by the following formula of

$$d = \sqrt{\frac{k_h}{k_e}\rho} \cdot f^{-0.375} B_m^{-0.175} \qquad (1)$$

a2 cncld.

where k_h represents hysteresis loss coefficient, k_e represents eddy-current loss coefficient, $\rho(\Omega m)$ represents resistivity, f (Hz) represents frequency and B_m (T) represents maximum amplitude magnetic flux density of the soft magnetic material; and

a processor for driving a time display by the electric energy generated by the power generator.

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23. (Amended) The method of setting plate thickness in a magnetic circuit in a power generator according to claim 21,

wherein the soft magnetic material constituting at least one of the stator and the magnetic core has a lamination structure and the respective layers forming the lamination structure have a minimum thickness of not less than 0.05mm.

Please add the following **new claims 24 to 28**:

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24. (New) The power generator according to claim 6, wherein at least one of the stator and the magnetic core is made of a single layer or a lamination of the soft magnetic material of the plate thickness d.

25. (New) The power generator according to claim 24, wherein the soft magnetic material constituting at least one of the stator and the magnetic core has a lamination structure, and the respective layers forming the lamination structure have a minimum thickness of not less than 0.05mm.

26. (New) An electronic device, comprising:

a power generator comprising:

a rotor having a permanent magnet;

a stator and a magnetic core of soft magnetic material constituting a magnetic circuit; and

a coil wound around the magnetic core,

wherein the plate thickness d (m) of the soft magnetic material constituting at least one of the stator and the magnetic core is set within a plate

thickness range determined so that iron loss W does not exceed a reference value W_2, the reference value W_2 being obtained by a thickness d obtained in accordance with the following formula of

$$d = \sqrt{\frac{k_h}{k_e}\rho} \cdot f^{-0.375} B_m^{-0.175} \qquad (1)$$

where k_h represents hysteresis loss coefficient, k_e represents eddy-current loss coefficient, $\rho(\Omega \cdot m)$ represents resistivity, f (Hz) represents frequency and B_m (T) represents maximum amplitude magnetic flux density of the soft magnetic material, which is assigned to the following formula of

$$W \cong k_h d^{-1} B_m^{1.65} + k_e \frac{1}{\rho} d f^{0.75} B_m^2 \quad (6)$$

to calculate a minimum value W_1 of the iron loss W (J/m^3), the reference value W_2 being set greater than the minimum value W_1; and

a processor actuated by the electric energy generated by the power generator.

27. (New) An electronically controlled timepiece, comprising:

a power generator comprising:

a rotor having a permanent magnet;

a stator and a magnetic core of soft magnetic material constituting a magnetic circuit; and

a coil wound around the magnetic core,

wherein the plate thickness d (m) of the soft magnetic material constituting at least one of the stator and the magnetic core is set within a plate thickness range determined so that iron loss W does not exceed a reference value W_2, the reference value W_2 being obtained by a thickness d obtained in accordance with the following formula of

$$d = \sqrt{\frac{k_h}{k_e}\rho} \cdot f^{-0.375} B_m^{-0.175} \quad (1)$$

where k_h represents hysteresis loss coefficient, k_e represents eddy-current loss coefficient, $\rho(\Omega \cdot m)$ represents resistivity, f (Hz) represents frequency and B_m (T) represents maximum amplitude magnetic flux density of the soft magnetic material, which is assigned to the following formula of

$$W \cong k_h d^{-1} B_m^{1.65} + k_e \frac{1}{\rho} d f^{0.75} B_m^2 \quad (6)$$

to calculate a minimum value W_1 of the iron loss W (J/m^3), the reference value W_2 being set greater than the minimum value W_1; and

a processor for driving a time display by the electric energy generated by the power generator.

28. (New) The method of setting place thickness in a magnetic circuit in a power generator according to claim 22,

wherein the soft magnetic material constituting at least one of the stator and the magnetic core has a lamination structure and the respective layers forming the lamination structure have a minimum thickness of not less than 0.05mm.

REMARKS

Claims 12, 14, 15 and 23 have been amended and Claims 24 to 28 have been added to minimize multiple dependency and place them in better form for U.S. practice but such amendments are not intended to narrow the scope of any claim.

Favorable consideration is respectfully requested.

Respectfully submitted,

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